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5 November 2016

Online at <https://mpra.ub.uni-muenchen.de/81825/>  
MPRA Paper No. 81825, posted 10 Oct 2017 12:48 UTC

# **The Ageing Trend and Related Socio-Economic Issues in Vietnam**

Nguyen Viet Cuong

## **Abstract**

The aging index of Viet Nam's population increased during the past 35 years. In 2014, the aging index was 43.8% for the population from 60 years and older and 30.3% for the population aged 65 and older. In addition, there is a growing trend of elderly people living alone in Viet Nam. In 2014 rural areas had a higher ratio of single elderly people than in urban areas. Women were more likely to live alone than men, and the rate of single elderly people living alone was lower among people who graduated from college or university. Up to 32.4% of the elderly aged 80 years or older in the group of low living conditions were living alone in 2014. This proportion in the group of elderly aged 80 years or older with high living conditions was only 3.1%. Thus there was a large difference in the proportion of elderly people living alone in urban and rural areas and in households with different economic conditions.

JEL classification: I1, I2, O1.

Keywords: Elderly, Ageing Trending, Population Census, Vietnam.

## **1. Introduction**

Viet Nam has achieved remarkable economic growth since the implementation of economic reforms. The gross domestic product (GDP) growth rate has been decreasing in recent years, but still has reached an average of about 5% per year. Incomes, living standards, and the health of people have improved as the mortality rate has decreased and average life expectancy has increased. Population and family planning programs in Viet Nam have contributed to a decline in the fertility rate during the last three decades. At the same time, reduced mortality and increased life expectancy have caused the age-sex structure of the population to change remarkably. The proportion of middle-aged and elderly people has tended to increase. In 2009, the number of people aged 60 and older accounted for 10% of the population. Understanding the aging trend of Viet Nam's population is becoming increasingly important.

Age is one of the most important factors affecting human health, the economy, and human society in general. For each person, their education, health, income and other welfare indicators depend on their age. According to the life-cycle theory, people tend to have high incomes during their young adult and middle ages, and then lower incomes when they become old and retire (Deaton, 1986; 2005). Thus, income and expenditures for most people depend to a large degree on their age. From the macroeconomic perspective, the age structure of a country's population is a key factor related to economic growth. Different populations have different age structures. Thus, findings about the age structure of population are very important for policy makers, especially for Viet Nam, a country in transition in terms of population and economic structure.

Vietnam is a dynamic country with a large migration flow. Adults are more likely to migrate from rural to urban areas (Dang et al, 2003; Nguyen and Pham, 2016). Although migration of adults can bring higher income for households in destination, it can cause burdens to remaining household members including children and elderly (Nguyen, 2016; Nguyen and Vu, 2016). This study examines the ageing trend and analyse the issue of elderly people living alone and determinants of living alone using the Intercensal Population and Housing Survey (IPS 2014). This paper is structured into five sections. The second section introduces data set. The third section presents the aging trending in Vietnam. The fourth section analyses the problem of elderly people living alone and determinants of living alone. Finally the fifth section concludes.

## **2. Data set**

In 2014, Viet Nam's General Statistics Office (GSO) conducted the Intercensal Population and Housing Survey (IPS 2014). The 2014 IPS was a sample survey with a sample size of 5% of the total households in Viet Nam (1,121,850 households). The objective was to provide estimates of the size, structure and distribution of the population, as well as economic and social features at the provincial and district level. The information and data collected from the IPS 2014 can be used to analyze changes in the population over time for the whole country, for regions and for provinces to provide evidence for policymaking. Information from this analysis comprise an important input to the design and implementation of development programs, as well as social and economic strategies and policies, for various sectors for the period 2015-2020.

### 3. The aging of Viet Nam's population over time

Ageing is often measured by the ageing index. The aging index is calculated by measuring the number of people aged 60 (or 65) years or older in a population per 100 people under 15 years of age. It shows, in other words, how many people aged 60 (or 65) years and older there are for every 100 children aged 0-14.

Figure 1. Aging index, Vietnam, 1979-2014

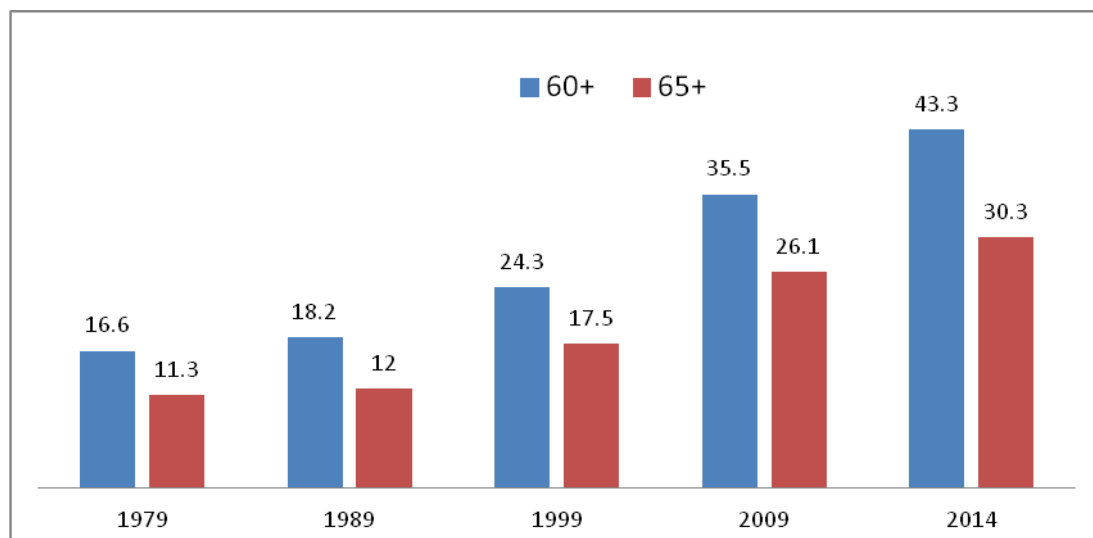


Figure 1 shows that the aging index of Viet Nam's population has increased during the past 35 years. In 1979, for every 100 children under 15 years there were only 16.6 people aged 60 years and older. Yet after 20 years (1999) the index increased by 1.5 times, and continued increasing to reach 43.3 people aged 60 years and older for every 100 children under 15 years in 2014, nearly 3 times higher than in 1979. The increase in the aging index reflects an increase in the health and life expectancy of the Vietnamese people. However, it also poses challenges for ensuring pensions and health care for the elderly.

Among the 10 ASEAN countries, the aging index of Viet Nam (calculated for the population aged 65 years and above) is just below Singapore and Thailand (see

Figure 2). The aging index of Viet Nam is much higher than other ASEAN countries such as Laos, Cambodia and the Philippines.

Figure 2. Aging indices (65+) of population in ASEAN countries, 2015

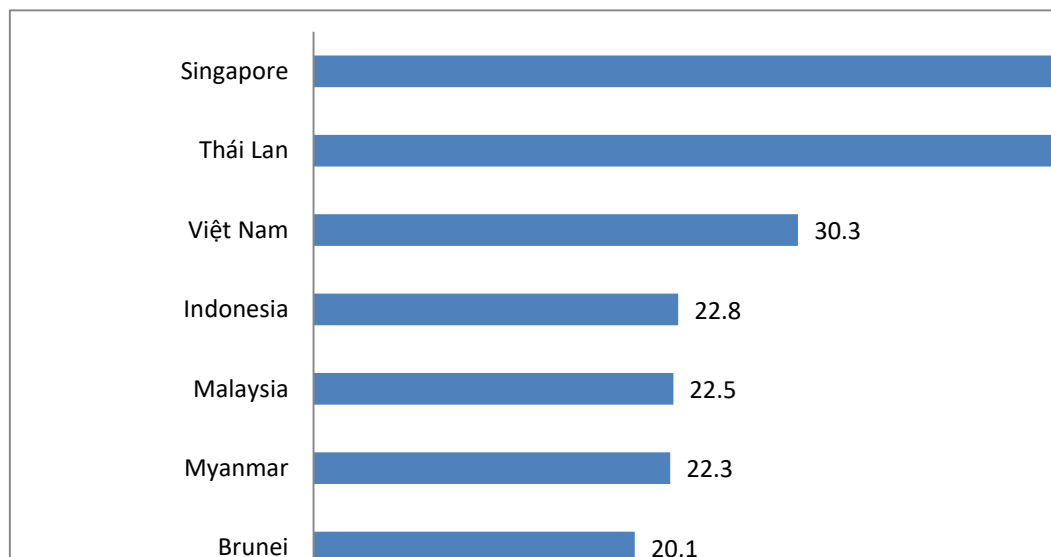


Figure 3 shows the differences in the aging index of the population between urban and rural areas and among socio-economic regions. The difference in the ageing index between urban and rural areas in Viet Nam is not large. For the index calculated based on the population aged 60 and older, the aging index for urban areas is higher than for rural areas by 2.7 percentage points (46.4% versus 43.7%).

Among the six socio-economic regions, the Red River Delta had the highest aging index, followed by the North and South Central Coast and Mekong River Delta, while the Central Highlands and the Northern Midlands and Mountains had the lowest aging index values. In the Red River Delta, for every 100 children under 15 years old, there were 56.8 people aged 60 and older, while in the Central Highlands, for every 100 children under 15 there were only 23.6 people aged 60 and older.

Figure 3. Aging indices by urban and rural areas and socio-economic regions, Viet Nam, 2014

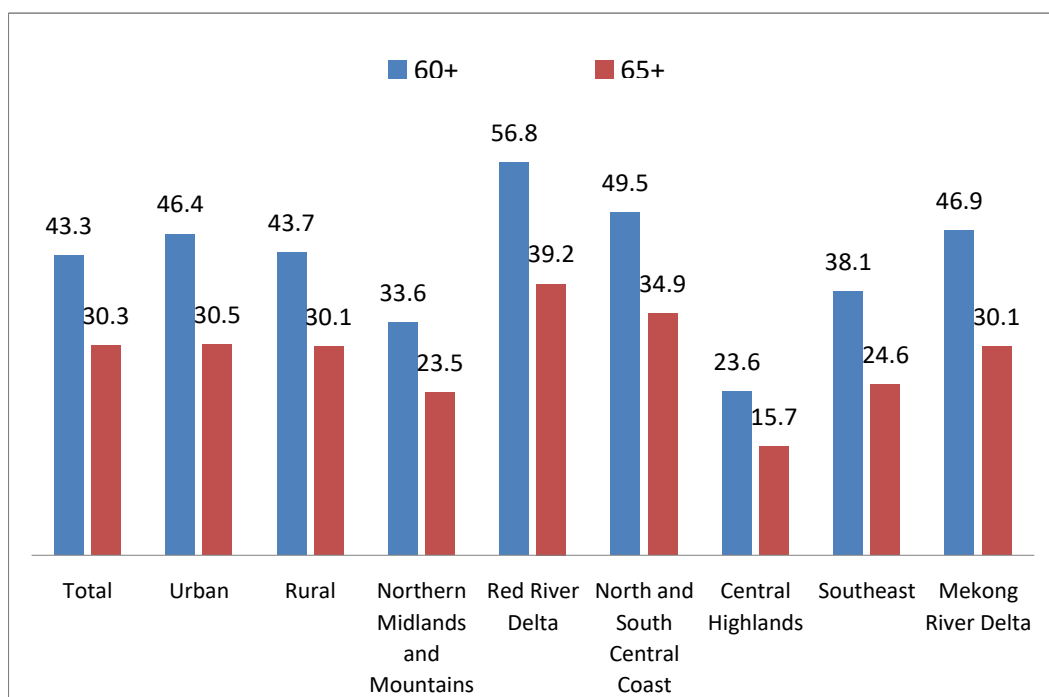


Figure 4 shows the aging index of the provinces/cities, by population aged 60 and older, in 2014. The provinces in the Red River Delta and the North and South Central Coast had the highest aging indices. Seven provinces with an aging index above 50 were Ha Tinh, Hung Yen, Ninh Binh, Nam Dinh, Hai Duong, Ha Nam and Thai Binh. Most of these are provinces in the Red River Delta, which has had relatively low fertility. The number of elderly migrants to these provinces is much higher than the number of child migrants.

Figure 4. Map of the aging index by province, Viet Nam, 2014

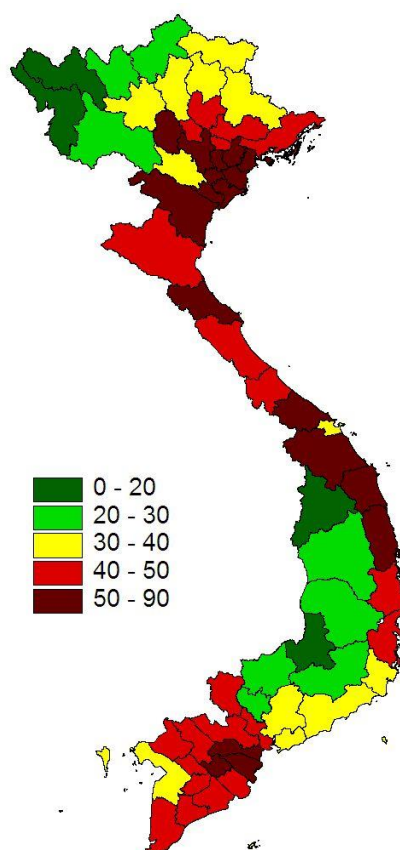


Figure 5. Comparison of the 10 provinces with the lowest aging index (60+) and the 10 provinces with the highest aging index, Viet Nam, 2014

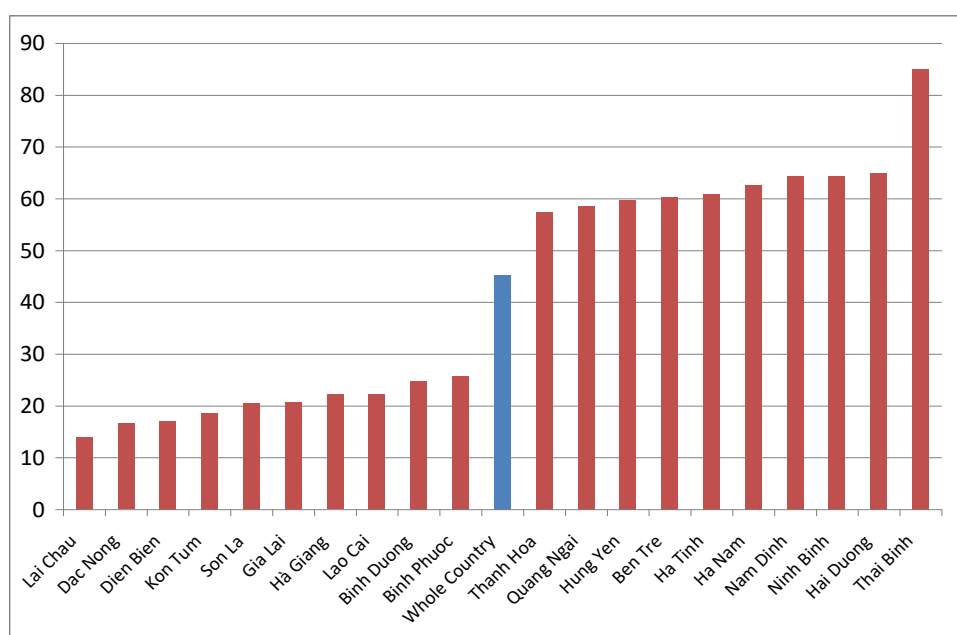
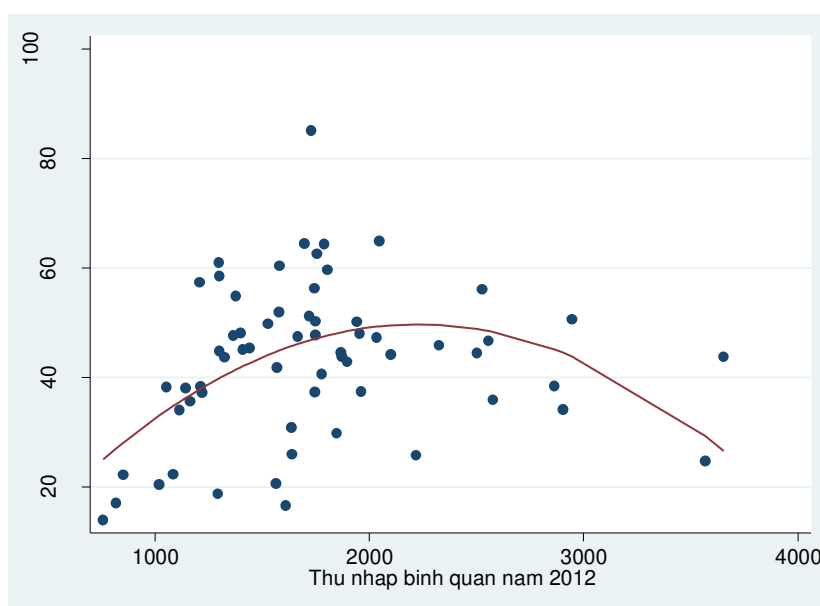




Figure 5 shows that among the 10 provinces with the lowest aging index, five are in the Northern Midlands and Mountains region (Lai Chau, Dien Bien, Son La and Lao Cai Ha Giang), three are in the Central Highlands (Dak Nong and Kon Tum and Gia Lai), and two are in the Southeast (Binh Duong and Binh Phuoc).

Figure 6 shows the U-shaped relationship between the aging index and the average income of the provinces. The poor provinces had a very low aging index, primarily because these provinces have a higher fertility rate and thus large numbers of children. Provinces with high living standards also had a low aging index, but this was not due to the high birth rate, but rather due to higher migration of young people to these provinces.

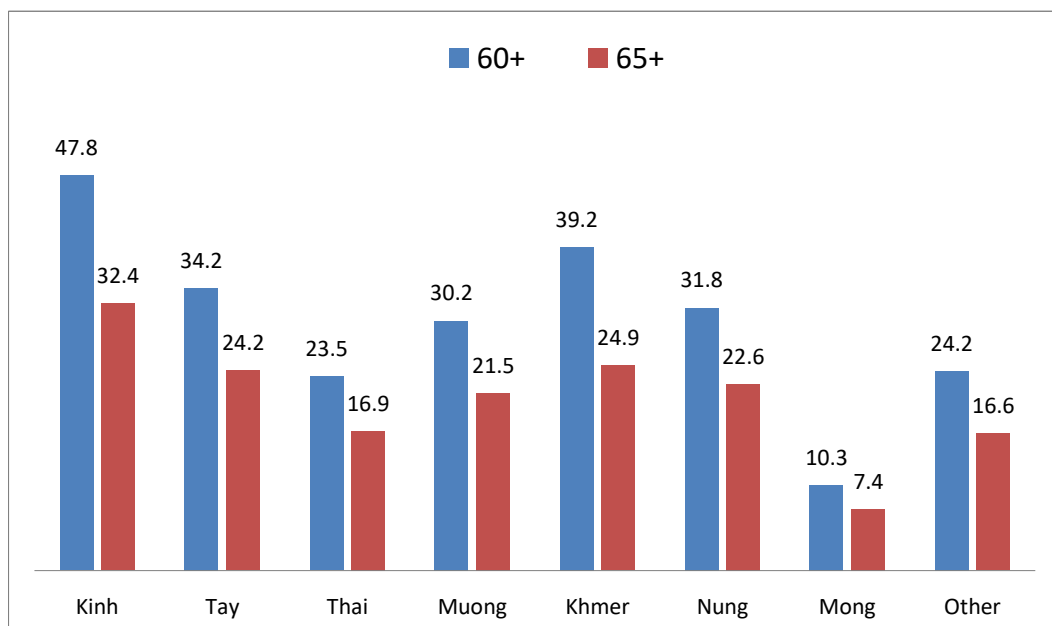
Figure 6. The aging index (60+) and average income of provinces, Viet Nam, 2014



Among the eight ethnic groups with a population of more than one million, the Kinh had the highest aging index, followed by ethnic Khmer. The Mong had the lowest aging index, followed by the Thai. While the aging index calculated for the population aged

60 years and older of the Kinh was 47.8%, it was only 10.3% for the Mong. The difference between ethnic Kinh and Mong is 4.6 times, equivalent to 37.5 percentage points. The main reasons for low aging indexes in ethnic minority groups are low life expectancy and high fertility rates.

Figure 7. Aging index by ethnic groups with populations of more than 1 million, Viet Nam, 2014



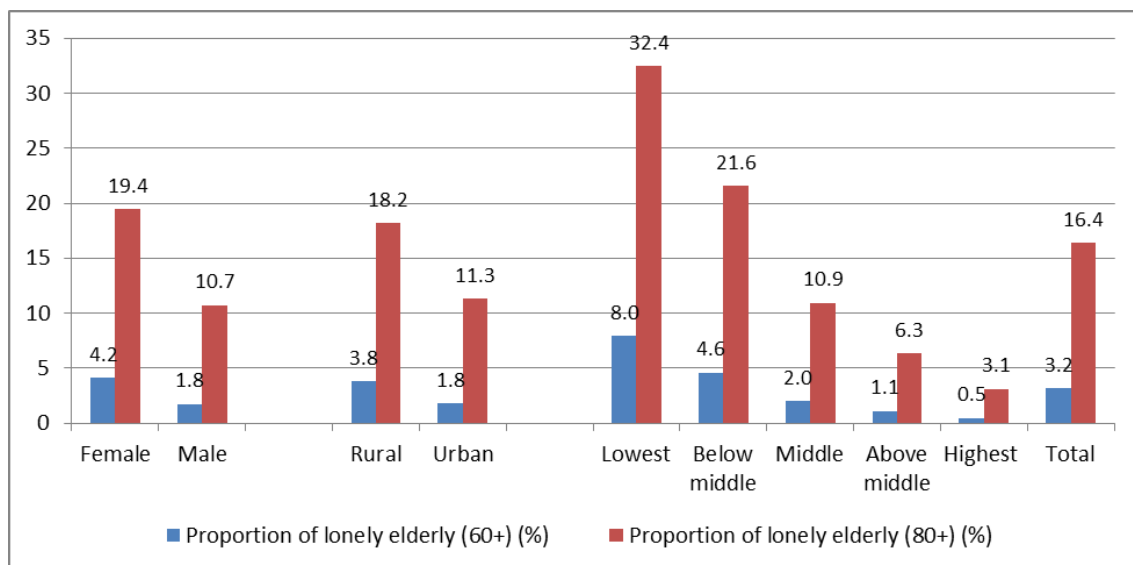
#### 4. Elderly people living alone and determinants of living alone

As described in the previous chapter, the aging problem poses many challenges to ensuring the health and welfare of the elderly. A related problem is the increasing number of single elderly people in Viet Nam. This problem may be due to migration of young people as well as a change in the culture whereby married children no longer live with their parents. Using data from the 2014 IPS, the proportion of elderly people who live alone can be estimated. Figure 8 shows that in 2014 the proportion of elderly people living alone was 3.2% among people aged 60 years and older, but was 16.4% among

seniors aged 80 years and older. Elderly women are more likely to live alone than elderly men. This may be due more to women's higher life expectancy compared to men, and a higher rate of widowed women. The rate of re-marriage among women is also lower than among men. Rural areas had a higher percentage of elderly people living alone than urban areas, primarily due to the rural-urban migration of young people.

Figure 8 provides estimates of the proportion of elderly people who live alone by living conditions. There is a strong positive correlation between living alone and living conditions. Approximately 32.4% of the elderly aged 80 years or older in the group with the lowest living condition were living alone. The proportion in the highest living condition group was just 3.1%. There is a large difference in the proportion of lonely elderly people between rural and urban areas; a large proportion of elderly people in rural areas with low living conditions live alone. This suggests that policies supporting single elderly people should be focused on poor areas and poor groups of elderly.

Figure 8. Proportion of elderly people living alone by living conditions, Viet Nam, 2014



To understand the factors affecting the welfare of individuals, regression analysis was used. Regression analysis provides an understanding of the effect of one explanatory variable on a dependent variable after controlling for other explanatory variables.

In this study, the logistic regression model was used, which is applied to binary variables (Green, 2011). The dependent variable is a dummy variable indicating individuals living alone. Since the logistic function is non-linear, the coefficient of explanatory variables in the logistic function does not have clear economic meaning. To interpret the meaning of the coefficient, the marginal effect of explanatory variables was computed. In the following table, the marginal effects are presented.

Table 1 shows the influence of some factors on the probability of elderly people living alone. These include demographic variables, ethnicity, education and geography.. The results show that women have a higher probability of living alone than men. Age has a positive correlation with the probability of living alone.

Single status also is influenced by culture, represented by religion. Religious people have a higher rate of living alone than non-religious people, especially among the elderly aged 80 years and older. In particular, after controlling for variables in the model, the proportion of single elderly religious people is higher than the proportion of non-religious elderly people by about 3.4%.

Kinh people has a higher proportion of elderly people living alone than ethnic minority people. This is primarily because the migration rate of Kinh is higher than among ethnic minorities. Also, because of migration rural areas tend to have a higher rate of single elderly people than urban areas; young people migrate to urban areas and

leave old people behind in rural areas. The Red River Delta and central regions have the highest proportion of single elderly people, while the Southeast and Mekong River Delta have the lowest proportion of single elderly people.

Table 1. Logistic regression of elderly people living alone, Viet Nam, 2014

Explanatory variables	Lonely elderly (from 60 and above)		Lonely elderly (from 80 and above)	
	Marginal effect	Standard error	Marginal effect	Standard error
Male (male=1, female=0)	-0.00003***	0.00001	-0.07246***	0.00446
Age	0.00018***	0.00003	0.05046***	0.01528
Age squared	-0.00000***	0.00000	-0.00029***	0.00009
Religion (yes=1, no=0)	0.00001***	0.00000	0.03444***	0.00668
Migrated in the past 5 years (yes=1, no=0)	-0.00002***	0.00001	-0.06735***	0.01850
Other ethnic minorities	Reference			
Kinh	0.00003***	0.00001	0.09490***	0.01036
Tày	-0.00001	0.00001	-0.02882	0.02833
Thái	-0.00003***	0.00001	-0.07559***	0.02192
Mường	-0.00002**	0.00001	-0.05655*	0.02936
Khmer	0.00004	0.00002	0.09163*	0.04882
Nùng	0.00001	0.00002	0.02482	0.04567
Mông	-0.00003***	0.00001	-0.09980***	0.01973
Have no education degree	Reference			
Have primary degree	-0.00000	0.00000	-0.00534	0.00552
Have lower-secondary degree	-0.00001	0.00000	-0.01229	0.00987
Have upper-secondary degree	-0.00001	0.00001	-0.01116	0.01692
Have college, university	-0.00002**	0.00001	-0.04685**	0.01997
Urban (urban=1, rural=0)	-0.00002***	0.00000	-0.05262***	0.00550
Northern Midlands and Mountains	Reference			
Red River Delta	0.00004***	0.00001	0.10613***	0.01214
North and South Central Coast	0.00002***	0.00001	0.06250***	0.01058
Central Highlands	-0.00000	0.00001	-0.00940	0.01458
Southeast	-0.00001***	0.00000	-0.03473***	0.01110
Mekong River Delta	-0.00001***	0.00000	-0.03303***	0.00896
Observations	140887		27438	
R-squared	0.383		0.0648	

Note: \*\*\* statistically significant at 1%; \*\* at 5%; and \* at 1%.

Education is also correlated with the probability of living alone. Those who graduated from college or university have a lower rate of living alone. This trend also reflects the correlation between standard of living (measured by the index of living

conditions) and elderly people living alone. Old people who have few assets and poor housing conditions are more likely to live alone compared to those with greater assets and better housing conditions.

## **5. Conclusions**

The aging index of Viet Nam's population increased during the past 35 years. In 2014, the aging index was 43.8% for the population from 60 years and older and 30.3% for the population aged 65 and older. Among the 10 ASEAN countries, the aging index of Viet Nam was just lower than Singapore and Thailand. Viet Nam's population is in an aging period. The relationship between the aging index and average income levels of provinces and cities follows the inverted U shape. Poor provinces and provinces with relatively high incomes had a lower aging index than the middle income provinces.

In addition, there is a growing trend of elderly people living alone in Viet Nam. In 2014 rural areas had a higher ratio of single elderly people than in urban areas. The Red River Delta and the central regions had a higher ratio of single elderly people than other regions, while the Southeast and Mekong River Delta had the lowest ratio of single elderly people.

Women were more likely to live alone than men, and the rate of single elderly people living alone was lower among people who graduated from college or university. Up to 32.4% of the elderly aged 80 years or older in the group of low living conditions were living alone in 2014. This proportion in the group of elderly aged 80 years or older with high living conditions was only 3.1%. Thus there was a large difference in the proportion of elderly people living alone in urban and rural areas and in households with different economic conditions.

Population projections indicate that the proportion of elderly people in Viet Nam will grow rapidly in the coming years. The country will face the challenge of population aging because many elderly people are economically dependent on others and have chronic diseases. Social insurance policies and health insurance programs should be developed and modified to adapt to an aging population. The government should have strategies and policies to ensure health care for a larger elderly population in the future. Raising the retirement age and better managing pension funds can be effective measures to ensure the affordability of insurance funds and ensuring social security for the elderly.

The issue of single elderly people also needs attention. Rural-urban migration of young people had led to an increasing number of elderly people living alone in rural areas. Households consisting of all dependent members and single elderly people tend to have low education levels and low living conditions. For these households, social pensions supporting the elderly as well as other types of supports for poor children and ethnic minorities are very important.

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